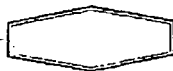


6-27-05  
12.3.8 v.9

# ASH GROVE CEMENT COMPANY



"WESTERN REGION"

June 27, 2005

Mr. Fred Austin  
Puget Sound Clean Air Agency  
110 Union Street, Suite 500  
Seattle, WA. 98101-2038

Re: Iron Grit Screening

Dear Mr. Austin:

Please examine the attached project description and estimate and advise if it is exempt under Regulation I Section 6.03 (b)(10). Ash Grove believes this project qualifies as an exempt activity since this project results in an emission estimate increase of about 600 lbs for PM and about 260 lbs/year PM<sub>10</sub>.

Yours truly,

Gerald J. Brown  
Manager Safety and Environmental

cc: C. Puljan  
B. Vantuyt

USEPA SF



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AGC2E000349

## Iron Grit Screening

This project is associated with importing Iron Grit, Screening it on-site and introducing it to the cement process as a feedstream iron supplement.

Process. Iron Grit is delivered in belly dump trucks and stockpiled onsite in an area 20' x 40'. 1000 tons per month are delivered and screened each month. The screening operation will occur 1 day per week and will last 5 hours per day. A loader will pick up the stockpiled material and load it onto the grizzly where it will be screened to minus ½ inch. Oversize material will be diverted to one stockpile (20' x 40' pile) and taken offsite. Undersized material will be diverted to another pile (20' x 40' pile) for storage. A loader will then introduce this material onto a hopper which will transfer the material to the iron storage bin.

### Emission points.

Three (3) piles 20 x 40 feet in dimension

Truck dump

Material transfer to grizzly

Grizzly to piles

Loader to hopper

Throughput: 1000 ton/month

### Emission Calculation.

4 transfers: 1000 tons/month, Truck to ground, Loader to grizzly, grizzly to pile, pile to process.

3 piles: each 20' x 40' → 2400 ft<sup>2</sup> total area

Transfer emissions: AP-42 emission factor, Section 11.12 Concrete Batching, October, 2001:

Sand transfer (SCC 3-05-011-05): 0.0021 lb PM/ton sand

- Annual emissions (lb/yr) = 0.0021 lb/ton x 12,000 ton/yr x 4 transfers = 100 lb/yr
- Assume 50% PM<sub>10</sub>: 50 lb/yr PM<sub>10</sub>

Screening emissions: AP-42 emission factor, Section 11.19.2 Crushed Stone Processing and Pulverized Mineral Processing August, 2004: Screening (SCC 3-05-020-02): 0.025 lb PM/ton

- Annual emissions (lb/yr) = 0.025 lb/ton x 12,000 ton/yr = 300 lb/yr PM
- Annual emissions (lb/yr) = 0.0087 lb/ton x 12,000 ton/yr = 104 lb/yr PM<sub>10</sub>

Transfer to pile storage: AP-42 emission factor, Table 11.12-3 Aggregate delivery to ground storage (SCC 3-05-011-21): 0.0064 lb/yd<sup>3</sup> Maximum 1000 tons at any one time, sand density = 120 lb/ft<sup>3</sup>

- Annual emissions (lb/yr) = 0.0064 lb/yd<sup>3</sup> / 27 ft<sup>3</sup>/yd<sup>3</sup> x 1000 ton/mo / 120 lb/ft<sup>3</sup> x 2000 lb/ton x 12 months/yr = 47 lbs/yr x 3 piles = 142 lbs/yr PM

Pile Storage: AP-42 emission factor, Table 8.10-2 Emission factors for concrete batching (SCC 3-05-011), October, 1985, Wind erosion from sand and aggregate storage piles: 3.5 lbs/acre/day  
Annual emission (lb/yr) = 3.5 x 2,400/43,560 X 365 = 70 lbs/yr PM, (assuming 50% PM<sub>10</sub>), 35 lbs/yr PM<sub>10</sub>

**Annual Emissions Increase Summary: PM- 612 lbs/yr PM<sub>10</sub>- 260 lbs/yr**